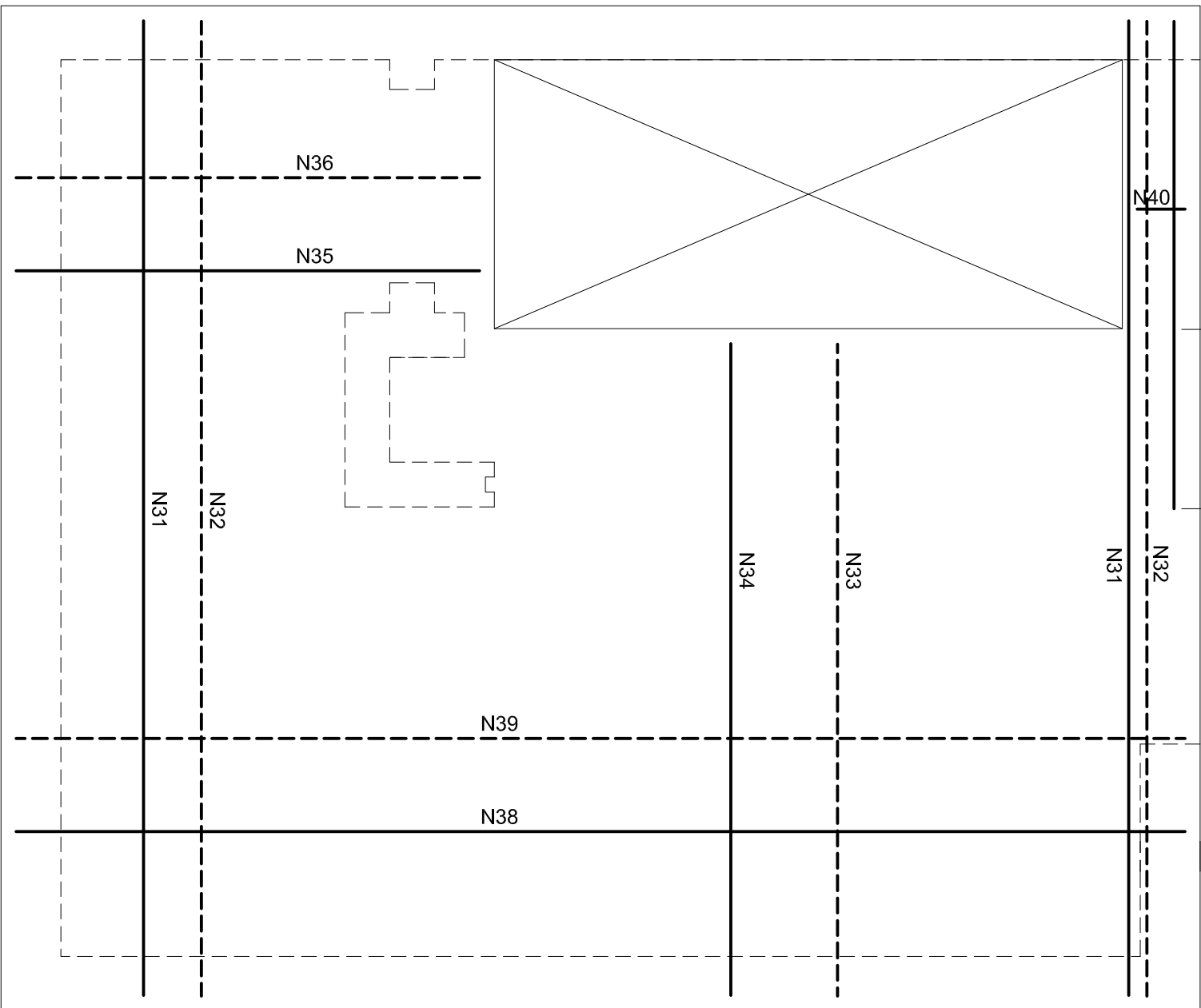
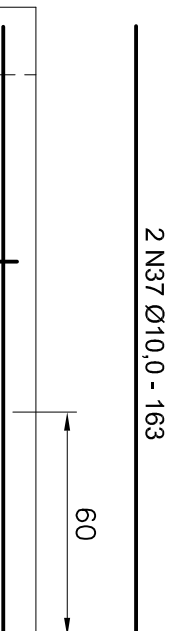


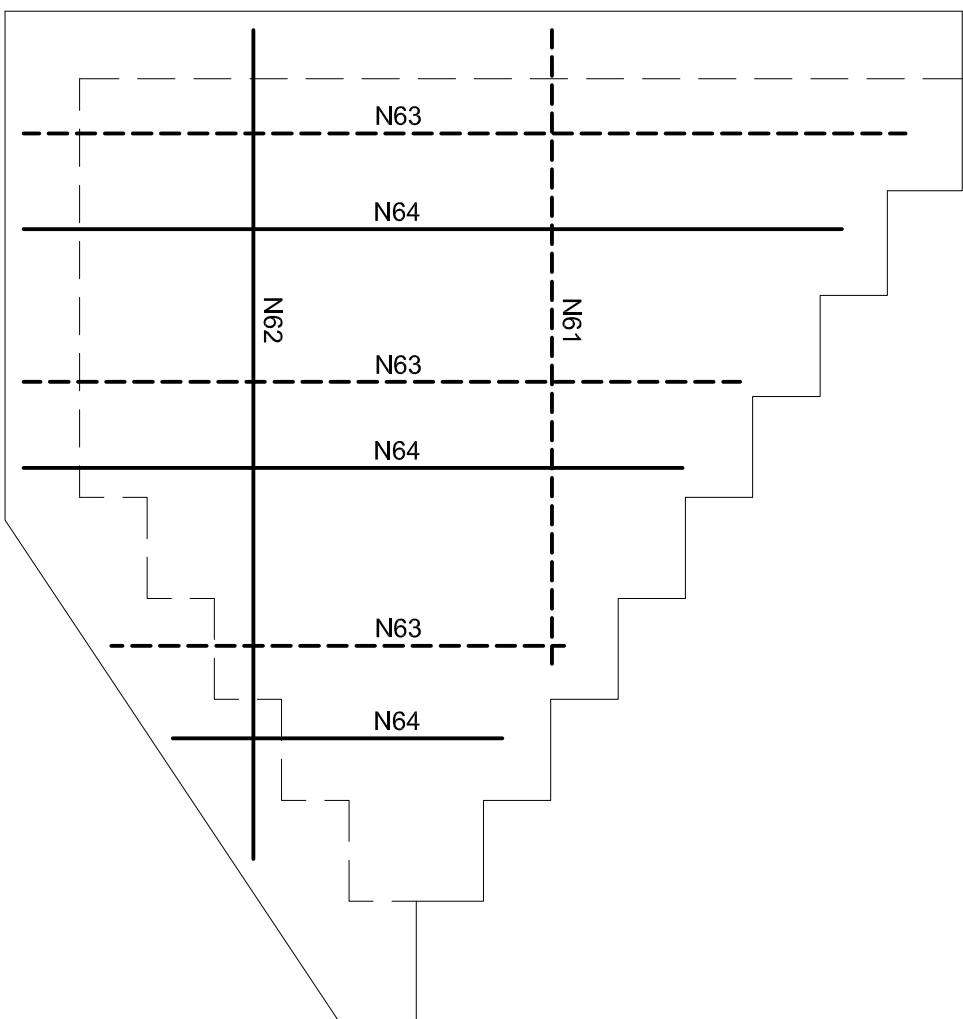
PAREDE 1

ESCALA 1/20



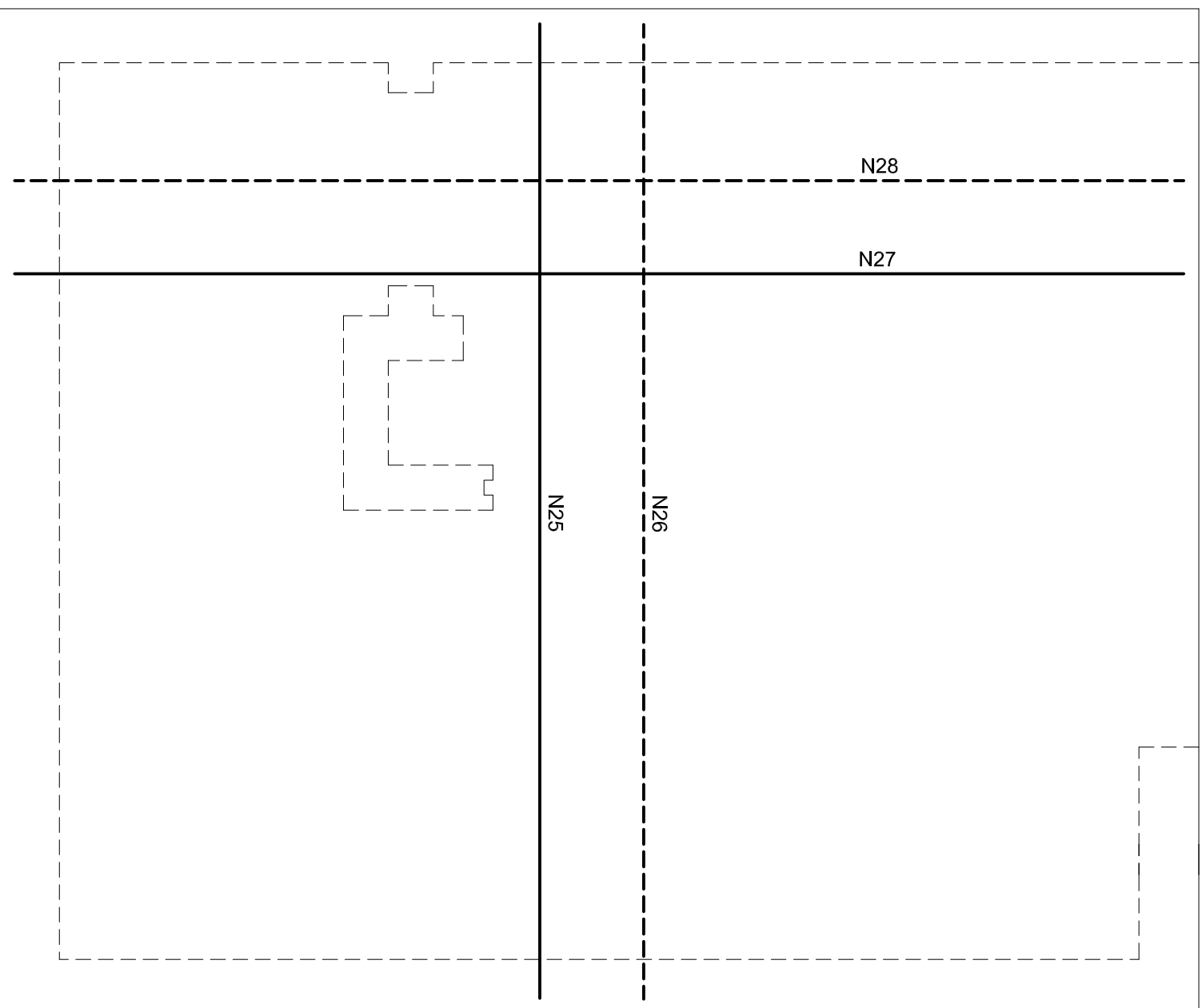
PAREDE 3

ESCALA 1/20



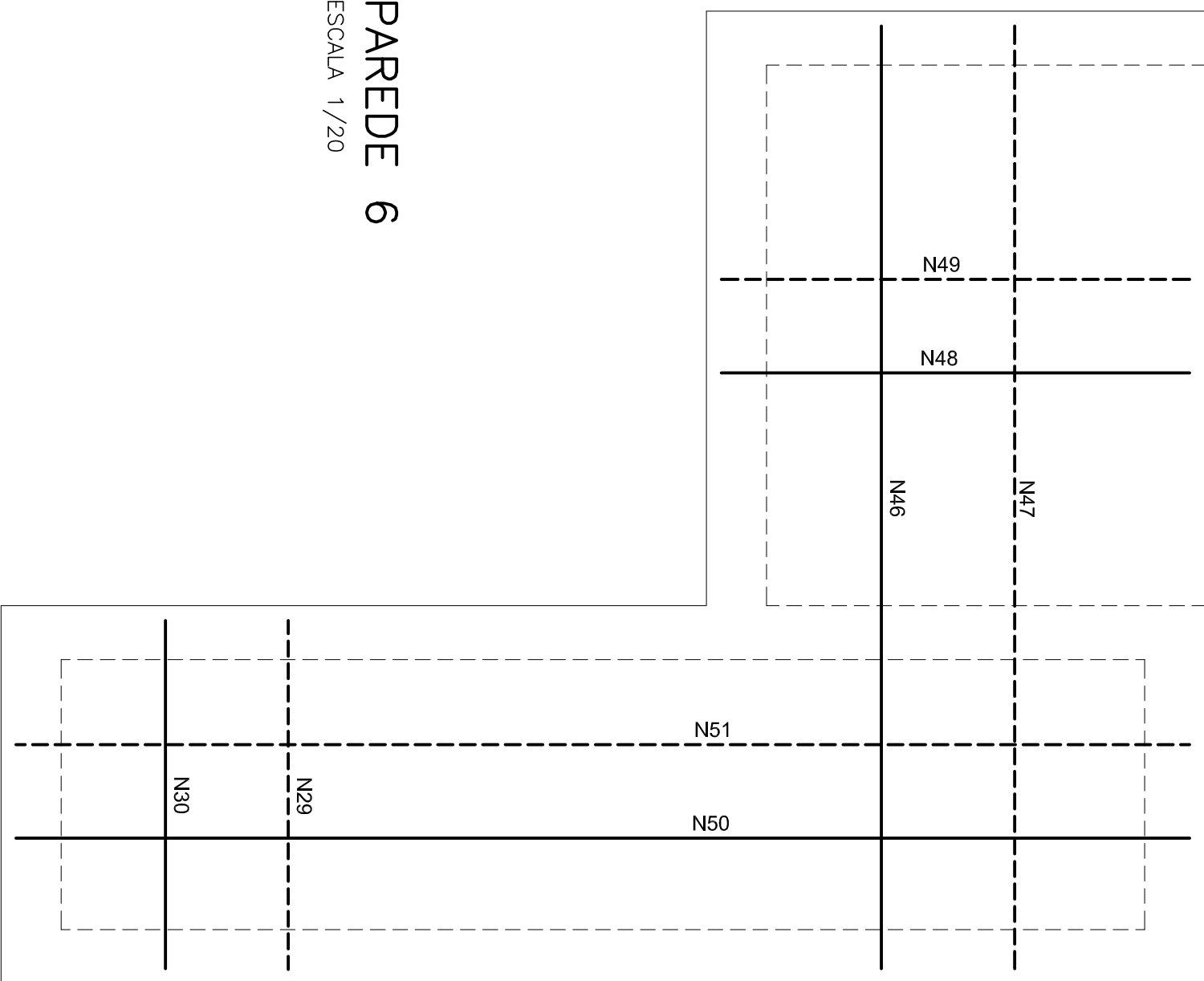
PAREDE 2

ESCALA 1/20



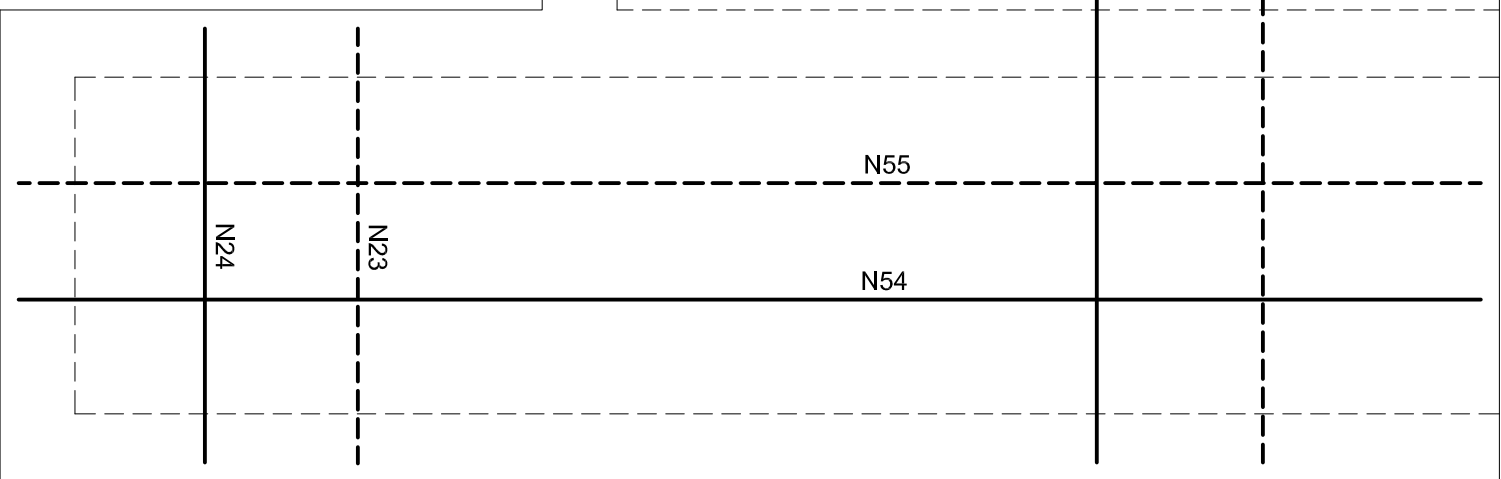
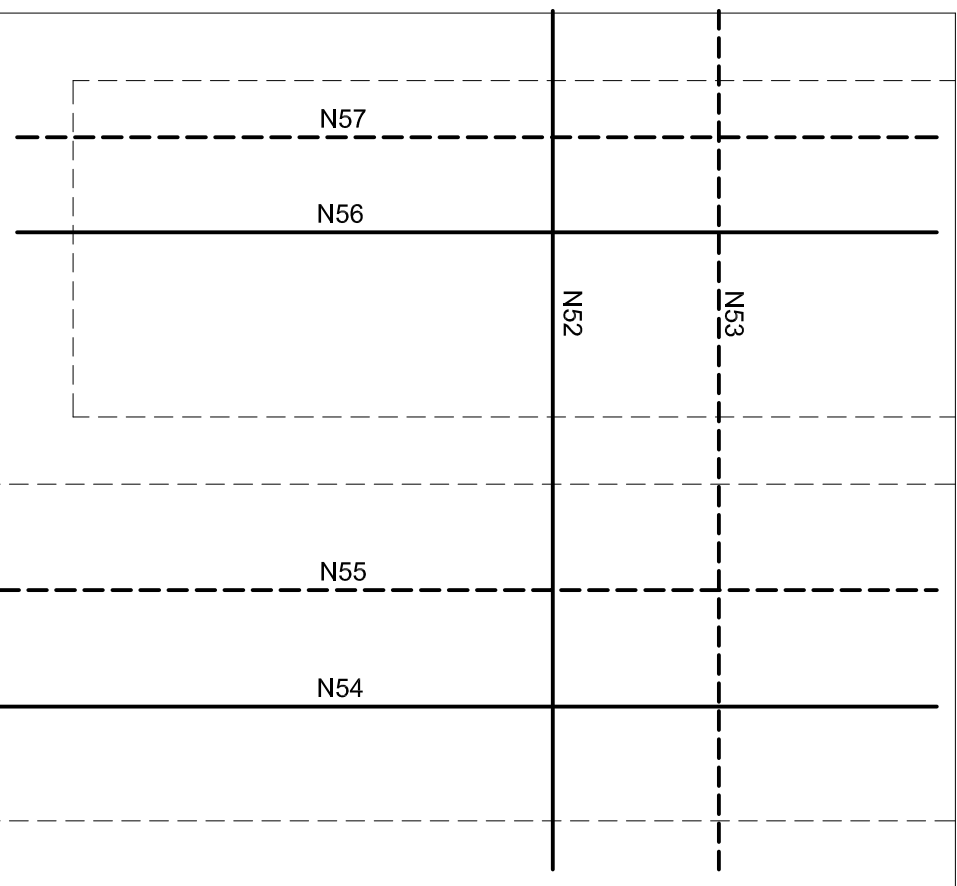
PAREDE 4

ESCALA 1/20



PAREDE 6

ESCALA 1/20



PAREDE 5


ESCALA 1/20

| TABELA DE AÇO - CÁLCULO DE MASSA | | | | | | |
|----------------------------------|---------------|----|------------|--------------------|-----------------|-----------|
| N° | DIÂMETRO (mm) | | QUANTIDADE | COMP. LÍQUIDO (cm) | COMP. TOTAL (m) | PESO (kg) |
| | | | | | | |
| 1 | 6,4 | 46 | ver. | 55,04 | 13,90 | 7,14 |
| 2 | 6,4 | 19 | ver. | 28,29 | 7,90 | 3,40 |
| 3 | 6,4 | 19 | ver. | 44,25 | 11,17 | 5,05 |
| 4 | 8,0 | 32 | ver. | 57,49 | 22,69 | 8,33 |
| 5 | 8,0 | 32 | ver. | 57,49 | 22,69 | 8,33 |
| 6 | 8,0 | 47 | 216 | 101,52 | 40,06 | 12,55 |
| 7 | 8,0 | 51 | 198 | 100,98 | 39,85 | 12,45 |
| 8 | 8,0 | 51 | 470 | 220,90 | 94,59 | 29,85 |
| 9 | 8,0 | 47 | 470 | 220,90 | 87,16 | 27,44 |
| 10 | 6,4 | 20 | 183 | 36,60 | 9,24 | 3,14 |
| 11 | 6,4 | 4 | ver. | 1,31 | 0,33 | 0,10 |
| 12 | 6,4 | 5 | ver. | 3,76 | 0,95 | 0,33 |
| 13 | 6,4 | 3 | 70 | 2,10 | 0,53 | 0,18 |
| 14 | 8,0 | 28 | 793 | 222,04 | 87,61 | 25,55 |
| 15 | 8,0 | 28 | 736 | 206,08 | 81,32 | 23,22 |
| 16 | 6,4 | 8 | 232 | 18,56 | 4,69 | 1,63 |
| 17 | 6,4 | 4 | 228 | 18,24 | 4,61 | 1,60 |
| 18 | 6,4 | 4 | 80 | 3,20 | 0,81 | 0,28 |
| 19 | 8,0 | 9 | 406 | 36,54 | 14,42 | 4,06 |
| 20 | 8,0 | 9 | 406 | 36,54 | 14,42 | 4,06 |
| 21 | 8,0 | 24 | 182 | 46,08 | 18,18 | 5,14 |
| 22 | 8,0 | 24 | 182 | 46,08 | 18,18 | 5,14 |
| 23 | 8,0 | 10 | 182 | 19,20 | 7,58 | 2,11 |
| 24 | 8,0 | 10 | 182 | 19,20 | 7,58 | 2,11 |
| 25 | 8,0 | 40 | 402 | 160,80 | 63,45 | 17,66 |
| 26 | 8,0 | 40 | 402 | 160,80 | 63,45 | 17,66 |
| 27 | 8,0 | 23 | 487 | 107,41 | 42,38 | 11,86 |
| 28 | 8,0 | 23 | 487 | 107,41 | 42,38 | 11,86 |
| 29 | 8,0 | 10 | 182 | 19,20 | 7,58 | 2,11 |
| 30 | 8,0 | 10 | 182 | 19,20 | 7,58 | 2,11 |
| 31 | 8,0 | 18 | 402 | 72,36 | 28,55 | 8,00 |
| 32 | 8,0 | 18 | 402 | 72,36 | 28,55 | 8,00 |
| 33 | 8,0 | 15 | 294 | 44,10 | 17,40 | 4,90 |
| 34 | 8,0 | 15 | 294 | 44,10 | 17,40 | 4,90 |
| 35 | 8,0 | 6 | 231 | 13,86 | 5,47 | 1,54 |
| 36 | 8,0 | 6 | 231 | 13,86 | 5,47 | 1,54 |
| 37 | 10,0 | 2 | 163 | 3,28 | 2,01 | 0,56 |
| 38 | 8,0 | 28 | 467 | 130,76 | 51,60 | 14,55 |
| 39 | 8,0 | 28 | 467 | 130,76 | 51,60 | 14,55 |
| 40 | 6,4 | 8 | 58 | 4,64 | 1,17 | 0,33 |
| 41 | 8,0 | 7 | 214 | 14,98 | 5,81 | 1,63 |
| 42 | 8,0 | 7 | 216 | 19,44 | 7,67 | 2,14 |
| 43 | 5,0 | 6 | 28 | 1,56 | 0,44 | 0,12 |
| 44 | 8,0 | 6 | 196 | 11,76 | 4,64 | 1,30 |
| 45 | 8,0 | 6 | 196 | 11,76 | 4,64 | 1,30 |
| 46 | 8,0 | 18 | 390 | 70,20 | 27,70 | 7,75 |
| 47 | 8,0 | 18 | 390 | 70,20 | 27,70 | 7,75 |
| 48 | 8,0 | 15 | 233 | 34,95 | 13,79 | 3,86 |
| 49 | 8,0 | 15 | 233 | 34,95 | 13,79 | 3,86 |
| 50 | 8,0 | 9 | 467 | 42,03 | 16,58 | 4,66 |
| 51 | 8,0 | 9 | 467 | 42,03 | 16,58 | 4,66 |
| 52 | 8,0 | 18 | 300 | 54,00 | 21,31 | 5,94 |
| 53 | 8,0 | 18 | 300 | 54,00 | 21,31 | 5,94 |
| 54 | 8,0 | 9 | 467 | 42,03 | 16,58 | 4,66 |
| 55 | 8,0 | 9 | 467 | 42,03 | 16,58 | 4,66 |
| 56 | 8,0 | 9 | 322 | 28,98 | 11,44 | 3,22 |
| 57 | 8,0 | 6 | 68 | 3,96 | 0,61 | 0,17 |
| 58 | 5,0 | 6 | 68 | 3,96 | 0,61 | 0,17 |
| 59 | 5,0 | 6 | 100 | 6,00 | 0,92 | 0,25 |
| 60 | 5,0 | 6 | 100 | 6,00 | 0,92 | 0,25 |
| 61 | 8,0 | 18 | ver. | 42,84 | 16,90 | 4,75 |
| 62 | 8,0 | 18 | ver. | 42,84 | 16,90 | 4,75 |
| 63 | 8,0 | 19 | ver. | 43,91 | 17,33 | 4,88 |
| 64 | 8,0 | 19 | ver. | 43,91 | 17,33 | 4,88 |
| 65 | 8,0 | 12 | ver. | 35,51 | 14,01 | 4,01 |
| 66 | 8,0 | 12 | ver. | 35,51 | 14,01 | 4,01 |
| 67 | 8,0 | 24 | ver. | 43,37 | 17,11 | 4,75 |
| 68 | 8,0 | 24 | ver. | 43,37 | 17,11 | 4,75 |
| 69 | 8,0 | 7 | 314 | 21,98 | 8,67 | 2,42 |
| 70 | 8,0 | 7 | 150 | 10,50 | 4,14 | 1,16 |
| 71 | 8,0 | 7 | 380 | 26,60 | 9,45 | 2,64 |
| 72 | 8,0 | 7 | 342 | 23,94 | 9,45 | 2,64 |
| 73 | 8,0 | 7 | 309 | 21,63 | 8,53 | 2,39 |
| 74 | 8,0 | 7 | 140 | 9,80 | 3,67 | 1,04 |
| 75 | 8,0 | 7 | 163 | 12,81 | 5,05 | 1,42 |
| 76 | 8,0 | 7 | 167 | 11,69 | 4,61 | 1,29 |
| 77 | 8,0 | 28 | 98 | 27,44 | 10,83 | 3,03 |
| 78 | 8,0 | 28 | 98 | 27,44 | 10,83 | 3,03 |
| 79 | 8,0 | 26 | 98 | 25,46 | 10,05 | 2,81 |
| 80 | 8,0 | 26 | 98 | 25,46 | 10,05 | 2,81 |
| 81 | 5,0 | 6 | 28 | 1,68 | 0,26 | 0,07 |
| 82 | 10,0 | 4 | 166 | 6,64 | 4,09 | 1,14 |
| 83 | 10,0 | 4 | 166 | 6,64 | 4,09 | 1,14 |
| 84 | 6,4 | 6 | 136 | 8,16 | 2,06 | 0,58 |

NOTAS:

- 1 - AÇO CA-50
- 2 - RECOBRIMENTO: 4,5 CM
- 3 - COTAS EM CENTÍMETROS
- 4 - RECORTAR A ARMADURA PARA PASSAGEM DA TUBULAÇÃO

| RESUMO DE AÇO | | | |
|------------------|------------------------|----------------------------|-----------------------------|
| DIÂMETRO (mm) | ÁREA DE SEÇÃO (cm²) | MASSA NOMINAL (kg/m) | PESO TOTAL (kg) c/10% |
| 5,0 | 0,196 | 0,154 | 0,0 |
| 6,4 | 0,312 | 0,245 | 60,0 |
| 8,0 | 0,503 | 0,395 | 134,9 |
| 10,0 | 0,785 | 0,617 | 2,2 |
| TOTAL GERAL | | | 1432,0 |



| | | |
|---|----------------|-------------------------------------|
| INÍCIO: APACÁ | DISTRITO: SÍDE | BARRIO: |
| NOME DO EMPREENDIMENTO: AMPLIAÇÃO E MELHORIA DO SISTEMA DE ESOTAMENTAMENTO SANITÁRIO DE APACÁ TÍTULO: ESTAÇÃO ELEVADORA DE ESGOTO BRUTO – EEEB-A PLANTAS DE FERRAGEM 04/04 PAREDES E QUADRO DE FERRAGENS | | |
| ESCALA: 1:20 | FOLHA: 06/06 | Nº CESPAN B-096-000-91-4-XX-0006 |